Australian Bureau of Statistics

1367.2 - State and Regional Indicators, Victoria, Mar 2009
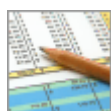Previous ISSUE Released at 11:30 AM (CANBERRA TIME) 14/05/2009

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FORTHCOMING ISSUES

ISSUE (QUARTER)	Release Date
June 2009	10 August 2009
September 2009	5 November 2009

NOTE

State and Regional Indicators, Victoria provides a summary of statistical information for Victoria at the State and/or regional level. Included in each chapter is commentary on statistical highlights which provides analysis and graphs on selected indicators.

This issue contains a feature article titled **Measuring Victoria's Population**. A list of all previous feature articles published is contained in Appendix 2 of the PDF version of this publication.

The statistics presented in this issue are the latest available as at 23 April 2009.

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CHANGES IN THIS ISSUE

State and Regional Indicators, Victoria is released on a quarterly basis with chapters updated when new data are available. Chapters and tables are only included when new data are available, so chapter and table numbers may vary between issues.

A new chapter in this issue is Housing.

FORTHCOMING CHANGES

This issue is the final release for which both PDF and HTML versions of the publication will be produced. From the June quarter 2009, only the HTML version of the publication will available.

EXPLANATORY NOTES

Explanatory Notes in the form found in other ABS publications are not included in **State and Regional Indicators, Victoria**. Readers are directed to the Explanatory Notes contained in related ABS publications.

Users are advised that small area estimates presented in this publication should be used with care.

Due to rounding, discrepancies may occur between sums of the component items and totals.

INQUIRIES

For further information about these and related statistics, contact the National Information and Referral Service on 1300 135 070 or Steve Gelsi on Melbourne (03) 9615 7590.

About this Release

State and Regional Indicators, Victoria (SRIV) is a quarterly publication that contains recently released statistical information about the whole of Victoria. Data is sourced from ABS and non-ABS collections. It provides measures according to a triple bottom line of economic, social and environment elements.

Most chapters contain a mix of tables, charts and commentary, to provide a basic analysis of recent movements in key economic, social and environmental data. Data is presented for varying geographic classifications, including, Victoria; Melbourne and the Balance of Victoria; down to Local Government Area for some series. The aim of the publication is to provide a picture of the situation of Victoria and enable comparison, both over time and between regions.

Core data, such as Estimated Resident Population, State Final Demand, Labour Force Statistics, Price Indexes, Building Approvals, Air Quality, and Water Storage Volumes is complemented by periodic annual data including the Condition of VicRoads Network, Recorded Crime Offences, Life Expectancy at Birth, Government Owned Housing Stock and others.

As the information is sourced from a wide variety of collections, care needs to be taken when analysing the data as time periods, definitions, methodologies, scope and coverage may differ from table to table. Advice is provided in the publication on such matters.

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LABOUR FORCE SURVEY SAMPLE SIZE REDUCTION

The sample size of the Labour Force Survey for July 2008 was reduced by 24% when compared with the June 2008 sample. The reduced sample is still representative, with selections made across all parts of Australia. However, there will be increased volatility in the estimates.

This reduction affects most tables in the chapter.

Detailed information about the sample reduction is provided in Information Paper: Labour Force Survey Sample Design**,** Nov 2007 (Second edition) (cat. no. 6269.0), which was released on 25 July 2008.

From February 2009, labour force estimates are based on population benchmarks derived from the 2006 Census of Population and Housing. Additionally, estimates for the period June 2001 to January 2009 have been revised. These changes have had minimal impact on the key aggregates. For further details, please refer to the February 2009 issue of Labour Force, Australia (cat. no. 6202.0).

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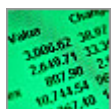
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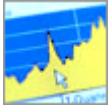
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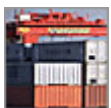
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Measuring Victoria's Population (Feature Article)

FEATURE ARTICLE: MEASURING VICTORIA'S POPULATION

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INTRODUCTION

Population estimates are one of the major outputs of any statistical office. They are critical for a wide range of planning and policy decisions. While population can be simply defined, such as the 'total number of persons living in an area', the concepts associated with its measurement are complex.

In Australia, the key population measure is estimated resident population (ERP), which is defined in terms of the number of people who usually live within Australia and its states and territories. The "usual residence" population concept refers to all people, regardless of

nationality or citizenship, who usually live in Australia, with the exception of foreign diplomatic personnel and their families. It includes usual residents who are overseas for less than 12 months and excludes overseas visitors who are in Australia for less than 12 months.

This article explains how the ABS derives ERP including the difference in the methodology used for national/state ERP and ERPs for geographic areas below the state level. The role of the Victorian regional office in producing these estimates is also discussed.

ESTIMATED RESIDENT POPULATION

There are several legislative requirements for the ABS to produce population estimates. For example sub-section 9(2) of the **Census and Statistics Act 1905** requires the quarterly estimation of the population for each state.
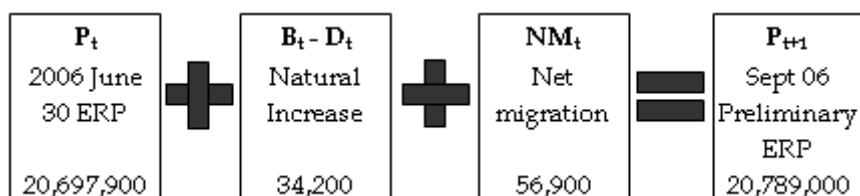
ERP is used in legislative decision making such as determining the number of seats each state/territory has in the House of Representatives and as the relative distributional basis for Commonwealth grants to states/territories and local government authorities. ERP is also used for per capita measures such as fertility and mortality rates, survey benchmarks, federal electoral boundary redistribution and budget planning.

The ABS conducts a Census of Population and Housing every 5 years, however this does not provide information about a population's size and composition in the years between Censuses, defined as the 'intercensal period'. The initial Census year estimate is determined after a process called 'rebasing' which involves a number of steps:

- obtaining place of usual residence data from the Census: in the Census usual residence means the address where a person has lived or intends to live for 6 months or more in the year of the Census (excluding overseas visitors in Australia for less than 12 months);
- adjusting for over or under enumeration;
- demographic adjustment;
- adjusting for residents temporarily overseas on Census night; and backdating to 30 June from Census night: this is necessary to get a consistent reference date for population estimates post-Census.

After establishing the 30 June Census year base, quarterly ERP over the intercensal period are calculated by ageing the base and then adjusting for subsequent components of population growth, i.e. adding natural increase (births minus deaths) and net overseas migration (estimated using passenger cards), and for the states and territories, net interstate migration (estimated using Medicare data). This method is known as the 'cohort component method' and uses the 'demographic balancing equation', which is recognised as the ideal approach for estimating population.

Quarterly updating of the population estimates for Australia, states and territories continues until the next Census results are available and the rebasing process is repeated to obtain a new starting point for the next intercensal period. The diagram below shows how population estimates are updated for one quarter.

Quarterly Preliminary Population Estimate, Australia **-** 30 September 2006

$$P_t \text{ (2006 June 30 ERP) } 20{,}697{,}900 \; + \; B_t - D_t \text{ (Natural Increase) } 34{,}200 \; + \; NM_t \text{ (Net migration) } 56{,}900 \; = \; P_{t+1} \text{ (Sept 06 Preliminary ERP) } 20{,}789{,}000$$

Note: The first release of the September 2006 estimate was based on the 2001 Census. When the June 2006 ERP was available as 'rebased' from the 2006 Census, the September 2006 ERP was recalculated from this new start population. Following this, the estimates undergo several revisions as more up-to-date data on births, deaths and migration becomes available. Statistics in the above diagram are the latest available.

The Census year ERP based on the current Census also provides a measure of how accurate the ERP was for the previous intercensal period. For example, the preliminary population estimate at 30 June 2006 calculated from the 2001 Census base using births, deaths and migration as described above was compared to the rebased June 30 estimate calculated from the 2006 Census. Using the cohort component method over the 5 years between 2001 and 2006 resulted in an underestimation of Australia's population. This difference is known as the 'intercensal error'.

After the intercensal error is determined, all quarterly ERP data for the previous intercensal period are revised using information from the Census on interstate migration and then spreading the remaining discrepancy evenly across the quarters. The initial revisions are 'preliminary rebased' estimates which are then updated again due to revision of the components in the intercensal period. The intercensal estimates are then updated once more to produce 'final rebased' ERP and no subsequent revisions are made after this process.

For further information on the rebasing process, see the Feature Article Final Rebasing and Revision of Australia's Population Estimates, September Quarter 2001 - June Quarter 2006 in Australian Demographic Statistics, Dec 2007 (cat. no. 3101.0).

ESTIMATED RESIDENT POPULATION FOR STATISTICAL LOCAL AREAS

'Sub-state' or 'small area' population estimates relate to areas below the state/territory level of geographic disaggregation. They are widely used by all levels of government, as well as business and the community. Estimates are produced for statistical local areas (SLA) which build up to local government areas (LGA) and statistical divisions (SD). For further information, see Australian Standard Geographic Classification (ASGC), July 2008 (cat. no. 1216.0).

While the cohort component method is considered the ideal method for estimating population in non-Census years, there are no reliable migration data at the SLA level making it very difficult to estimate SLA population using natural increase and net migration.

The method used to compile Census date SLA population estimates is similar to that used for national and state/territory estimates. However, as the demographic balancing equation can not be applied for post-Census estimates, mathematical models are used instead.

The models establish relationships between changes in population and changes in

population indicator data between the two most recent Censuses for groups of SLAs. Post-censal changes in these indicators are then used to estimate changes in the population of SLAs for the years following the most recent Census.

Population indicators are data that can be used to estimate total population change over time. They need to be:

- available for the entire estimation period;
- consistently defined; available at the relevant geographic level (or able to be converted to the relevant level) and;
- timely (available soon after the reference period).

Models are revised after each Census to ensure that the indicators used and the relationships established are providing the best outcome for SLA population estimation in each state/territory. Results from the 2006 Census enabled the ABS to develop new models for the 2007-2011 period. The most statistically robust model for each area is selected (i.e. the one that produces the 'best' estimates). This is the model which provided estimates for 2006 that are closest to the final (rebased) 2006 estimates.

DEVELOPING THE MODELS

A number of factors are taken into account when determining the best models to use. For example, characteristics such as population growth rates may vary quite considerably between SLAs. In acknowledgment of these differences, SLAs within a state are separated into subsets (known as strata) based on factors such as location (urban or rural) and population growth (high or otherwise).

More accurate estimates may then be calculated based on similarities existing within these subsets of SLAs and their relationship to particular combinations of indicators. Some indicators are more closely related to population change for some SLAs than others and usually a combination of indicators work better than a single indicator.

The selection of indicators varies across states and territories. For Victoria, the current set of models use indicator data from ABS dwelling approvals, Medicare enrolments and Australian Electoral Commission (AEC) enrolments.

INDICATORS

Dwellings (approvals)

Dwelling counts from the last Census are used as the base number of dwellings by SLA. Updated estimates of dwellings are prepared by adding approvals to the Census base. Dwellings approvals are divided into houses and flats/apartments, which generally have different building lag times. A 6 month lag is applied to housing approvals and 12 months for flats/apartments.

Medicare

Medicare enrolments for men, women and children are provided by postcode to the ABS by

Medicare Australia. Generally, changes to the number of Medicare enrolments provide a reasonable indication of total population change.

Again, there is an assumed discrepancy between the time a person moves and changes their address, therefore Medicare enrolments are lagged by 3 months from the reference date.

Australian Electoral Commission

Counts of people by sex on the Commonwealth electoral roll are provided to the ABS by the Australian Electoral Commission (AEC). The data are provided at collection district (CD) level and aggregated to the SLA level. AEC data are also lagged by 3 months and not all strata models use these data.

Different weights are applied to each indicator in different models, as the relative importance of each indicator changes according to the stratum to which an SLA belongs. For example, births can have a greater impact on population growth in the fast growing suburban areas of Melbourne that are attracting families. Therefore the model used for these SLAs may give a greater weight to the number of children enrolled in Medicare. Similarly, some models may use AEC data while others don't, as this indicator may have a closer relationship to population change in some areas compared with others.

LIMITATIONS AND IMPLICATIONS

Using the indicators to estimate change in population under various assumptions does have some limitations due to the time lag, coverage and quality of the indicator data sets:

- The length of lag time for dwelling approvals has been tested, however in some large building development projects a longer lag may occur;
- Accounting for permanent residents of serviced apartment buildings that were completed during the intercensal period is not incorporated in the models. Anecdotal evidence provided by state and local governments suggests that serviced apartment buildings in some inner Melbourne areas are being partially occupied by permanent residents. However, only approvals for residential buildings are used as inputs into models. Serviced apartment buildings are classified as 'non-residential buildings', therefore people who are usual residents of serviced apartments may not be directly picked up by the approvals data and may need to be accounted for in other indicator data;
- Even though people can only reside in occupied dwellings, the base dwellings count from the Census incorporates both occupied and unoccupied dwellings. This is consistent with the unknown eventual occupancy status of an approval. Using dwelling approvals as an indicator of population change assumes that the occupied/unoccupied ratio of approvals is the same as that of Census dwelling counts, which has limitations if the assumption does not hold over the estimation period;
- Medicare data are currently only available by postcode and converted to SLA using a concordance. The quality of the data is highly dependent on the quality of the postcode to SLA concordance;
- The models rely on the accuracy of datasets maintained for administrative purposes by Medicare and the AEC. While adjustments are made to the data such as applying a time lag to the reference period, there may still be implications for the statistical quality of the data;
- Undercoverage of some sub-populations. There are issues for enumerating some sub-

sections of the population in the Census, which affect the base population for ERP.These population groups may also be under-represented in the indicator data. Overseas students are one example, which may have an impact on Victoria due to the large volume of overseas migration for study purposes. For example, areas around Inner-Melbourne present a particular issue for enumerating growing populations of overseas students. The AEC and Medicare indicator data set may not capture overseas students who are considered to be usual residents of Australia for the purpose of ERP. They may also be left out of the Census base count depending on how the question for usual residence is interpreted;

- In using models, we are making an assumption that the relationship between past population change and indicator data will continue into the future - if the relationship breaks down during the intercensal period then the models cannot account for it.

Aside from these known issues and limitations, the models are generally effective and accurate for the majority of SLAs. The use of Medicare and/or AEC along with dwelling approvals data goes some way to counteracting some of the problems described. However, awareness of indicator data characteristics and the potential impact on estimates within each state is a crucial part of producing local level ERP. Therefore, validation of ERP produced by the models is a significant part of the process for estimating resident population.

ROLE OF THE ABS VICTORIAN REGIONAL OFFICE IN THE VALIDATION PROCESS

After initial estimates of SLA ERP are produced by models it is considered vital to confront the results against local knowledge. The models have limitations as discussed above, so incorporating expertise in the regional offices of the ABS not only allows for local intelligence to be drawn into the process but also allows a wider use of resources for increased scrutiny of the initial estimates.

The validation process undertaken within the Victorian office is a major exercise. Significant effort is placed on gathering supplementary data and information leading up to the validation and analysis phases, prior to receiving modelled ERP.

The growth and contribution of indicator data to the population is considered more closely using trend analysis over time, local knowledge of the area and a number of validation resources. The key resources used are:

- **ERP Local Government Authority Survey**; each year the Victorian Regional Office sends a survey to all local government councils requesting information relevant to population change within their Local Government Area for the previous year;
- **Regional intelligence**; throughout the year information is gathered from media reports to develop an understanding of current proposals, completions and delays in housing developments to assist in assessing the underlying dwelling approvals data;
- **Consultation** with state and local government agencies is undertaken as needed to further clarify the changes in population.

The models are used to estimate population for 200 SLAs in Victoria(footnote 1), so assessing all of them in detail would involve a high overhead of resources and time; therefore efforts are concentrated on areas of significant change. The first stage of the validation process is to short-list SLAs which will be subject to more detailed scrutiny. During preparation, some of these are selected based on the results of regional intelligence, the

ERP Local Government Authority Survey or other factors identified in previous validation rounds. To ensure that the majority of SLAs are selected based on the significance of change since the previous year's estimate, a validation tool is used, which performs a series of tests on the data. Based on these tests, particular SLAs are selected for detailed scrutiny.

The validation data sources and local information may be used to adjust the modelled estimate for a particular SLA. The aim of validation is to account for population changes which may not be (directly or indirectly) picked up by the models. For example, a dwelling approval for a large block of flats may have been taken into account in the initial estimate of the ERP for an SLA. However, if local knowledge indicates that the building has not been completed and occupied within 12 months of the approval, the population estimate may need to be adjusted downwards.

The Victorian Regional Office of the ABS regularly assesses validation sources and investigates others that may be useful in understanding population growth for small areas in Melbourne and Regional Victoria.

REVISING SLA POPULATION ESTIMATES

Part of the complex nature of estimating usual resident population is the revision cycle. To meet conflicting demands for accuracy and timeliness there are several versions of sub-state population estimates.

For sub-state estimates, preliminary data are normally available nine to ten months after the reference date, so for the year ended June 30 the data are released by April the following year.

Revised estimates are then provided 12 months later. This is because estimates at the SLA level are constrained to state/territory population estimates. When those estimates are revised following updates to components of natural increase, net overseas migration and net interstate migration at the state and territory level, the sub-state SLA populations are also adjusted to add to the revised state and territory totals.

Preliminary Rebased and Final Rebased estimates are calculated after the next Census. Once a Census is held, new population estimates for each SLA at 30 June in the Census year are calculated as described above under 'Estimated Resident Population'. The models have also calculated preliminary 30 June SLA ERP for that year based on the previous Census, which allows an assessment of the performance of the models over the intercensal period. As a result, all ERP for all sub-state areas for the intercensal period are rebased by apportioning the intercensal error evenly across the 5 years, but constraining it to state/territory totals.

A summary of the accuracy of the preliminary 2006 ERP is provided in paragraphs 12 to 15 of the Explanatory Notes of Regional Population Growth, Australia, 2007-08 (cat. no. 3218.0).

DATA AVAILABILITY

National and state/territory ERP is produced for each quarter and data are available five to six months after the reference date in Australian Demographic Statistics (cat.no.3101.0). The most recent release was for September quarter 2008, while ERP for the December

quarter 2008 will be available in early June 2009.

The ABS publishes small area ERP annually in Regional Population Growth, Australia (cat. no. 3218.0). The most recent publication, released in April 2009, provides ERP by SLA, LGA and SD for the 2007-08 financial year. ERPs for other geographical areas are available on request.

ABS will also release an updated version of **Population Estimates: Concepts, Sources and Methods** (cat. no. 3328.0.55.001) in June 2009 which will provide further information on the ABS process for estimating resident population.

REFERENCES

Australian Bureau of Statistics (ABS) 1999, Demographic Estimates and Projections: Concepts, Sources and Methods, 1999, cat. no. 3228.0.

ABS 2008, Feature Article: Final Rebasing and Revision of Australia's Population Estimates, September Quarter 2001 - June Quarter 2006, in Australian Demographic Statistics, Dec 2007, cat. no. 3101.0.

ABS 2009, Regional Population Growth, Australia, 2007-08, cat. no. 3218.0.

ABS 2009, Australian Demographic Statistics, Sep 2008, cat.no.3101.0.

1 There are currently 210 SLAs in Victoria, however in areas where indicator data are unreliable and migration can be assumed to be insignificant, population change since the previous Census may be estimated by adding estimates of natural increase (births minus deaths) since the previous Census. In some very small areas population change since the previous Census may be assumed to be zero in the absence of any reliable indicator data for these areas. <back

Explanatory Notes

Explanatory Notes

EXPLANATORY NOTES

INTRODUCTION

This quarterly publication contains data from several ABS publications, as well as from non-ABS sources. Explanatory Notes in the form found in other ABS publications are not included in **State and Regional Indicators, Victoria**. Readers are directed to the Explanatory Notes contained in related ABS publications.

Retail Trade, Australia (cat. no. 8501.0)

Labour Price Index, Australia (cat. no. 6345.0)

Sales of New Motor Vehicles, Australia (cat. no. 9314.0)

Australian Demographic Statistics (cat. no. 3101.0)

Causes of Death, Australia (cat. no. 3303.0)

Office of Housing, Department of Human Services, Victoria

Labour Force, Australia (cat. no. 6202.0)

Labour Force, Australia, Detailed - Electronic Delivery (cat. no. 6291.0.55.001)

Labour Force, Australia, Detailed, Quarterly (cat. no. 6291.0.55.003)

Department of Education, Employment and Workplace Relations (DEEWR)

Average Weekly Earnings, Australia (cat. no. 6302.0)

Australian National Accounts: National Income, Expenditure and Product (cat. no. 5206.0)

Consumer Price Index, Australia (cat. no. 6401.0)

House Price Indexes: Eight Capital Cities (cat. no. 6416.0)

Building Activity, Australia (cat. no. 8752.0)

Building Approvals, Australia (cat. no. 8731.0)

Engineering Construction Activity, Australia (cat. no. 8762.0)

Tourist Accommodation, Small Area Data, Victoria (cat. no. 8635.2.55.001)

Livestock Products, Australia (cat. no. 7215.0)

Dairy Australia

International Trade in Good and Services, Australia (cat. no. 5368.0)

Environment Protection Authority, Victoria

Department of Primary Industries, Victoria

Glossary

GLOSSARY

Chain volume measures

Annually-reweighted chain Laspeyres volume price indexes referenced to the current price values in a chosen reference year (i.e. the year when the quarterly chain volume measures sum to the current price annual values). Chain Laspeyres volume measures are compiled by linking together (compounding) movements in volumes, calculated using the average prices of the previous financial year, and applying the compounded movements to the current price

estimates of the reference year.

Generally, chain volume measures are not additive. In other words, component chain volume measures do not sum to a total in the way original current price components do. In order to minimize the impact of this property, the ABS uses the latest base year as the reference year. By adopting this approach, additivity exists for the period following the reference year and non-additivity is relatively small for the years immediately preceding. A change in reference year changes levels but not growth rates, although some revision to recent growth rates can be expected because of the introduction of a more recent base year (and revisions to the current price estimates underlying the chain volume measures).

Deficit and surplus

A deficit occurs when the sum of all debit entries exceeds the sum of all credit entries, and a surplus occurs when the sum of all credit entries exceeds the sum of all debit entries. The term deficit (or surplus) can therefore be used in relation to various balances, e.g. balance of trade.

Duration of unemployment

The elapsed period to the end of the reference week since a person began looking for work, or since a person last worked for two weeks or more, whichever is the shorter. Brief periods of work (of less than two weeks) since the person began looking for work are disregarded.

Employed

Persons aged 15 years and over who, during the reference week:

- worked for one hour or more for pay, profit, commission or payment in kind, in a job or business or on a farm (comprising employees, employers and own account workers);
- worked for one hour or more without pay in a family business or on a farm (i.e. contributing family workers);
- were employees who had a job but were not at work and were:
  - away from work for less than four weeks up to the end of the reference week;
  - away from work for more than four weeks up to the end of the reference week and received pay for some or all of the four week period to the end of the reference week;
  - away from work as a standard work or shift arrangement;
  - on strike or locked out;
  - on workers' compensation and expected to return to their job;
- were employers or own account workers who had a job, business or farm, but were not at work.

Part-time workers

Employed persons who usually worked less than 35 hours a week (in all jobs) and either did so during the reference week, or were not at work in the reference week.

Particles as PM$_{10}$

Particles with an aerodynamic diameter of 10 micrometres or less.

Photochemical oxidants and ozone

'Photochemical oxidants' is the technical term for the type of smog found in Australian cities during the warmer months of the year. This type of smog can be invisible or it can appear as a whitish haze.

Photochemical oxidants are formed when sunlight falls on a mixture of chemicals in the air. Ozone is one of the main photochemical oxidants. Other chemicals such as formaldehyde are also found and, like ozone, have adverse health effects. Environment agencies measure the level of ozone because it indicates the total amount of photochemical oxidants in the air. Cities that have abundant sunshine over periods of time, together with moderate winds and high temperatures, are most likely to experience high levels of photochemical oxidants.

Ozone is a gas that is formed when nitrogen oxides react with a group of air pollutants known as 'reactive organic substances' in the presence of sunlight. The chemicals that react to form ozone come from sources such as: motor vehicle exhaust, oil refining, printing, petrochemicals, lawn mowing, aviation, bushfires and burning off. Motor vehicle exhaust fumes produce as much as 70% of the nitrogen oxides and 50% of the organic chemicals that form ozone. (Source: Australian Government Department of the Environment, Water, Heritage and the Arts, <http://www.environment.gov.au>)

Re-exports

Re-exports are defined as goods, materials or articles originally imported into Australia which are exported in either the same condition in which they were imported, or after undergoing some minor operations (e.g. blending, packaging, bottling, cleaning and sorting) which leave them essentially unchanged. Included in international merchandise export statistics.

Seasonal adjustment

A means of removing the estimated effects of normal seasonal variations from economic time series so that the effects of other influences are obvious. Seasonal variations are the systematic (though not necessarily regular) intra-year movements of economic time series. These are often the result of non-economic phenomena, such as climatic changes and regular religious festivals (e.g. Christmas and Easter).

State final demand

Conceptually identical to domestic final demand at the national level (the sum of private and government final consumption expenditure and private and public gross fixed capital formation).

National estimates are based on the concepts and conventions embodied in the System of National Accounts, 1993, but for regional (including state) estimates there is no separate international standard. Although national concepts are generally applicable to state accounts, there remain several conceptual and measurement issues that either do not apply or are insignificant nationally. Most of the problems arise in the measurement of gross state product for the transport and storage, communication services, and finance and insurance industries, where production often takes place across state borders. In these cases, a number of conceptual views can be applied to the allocation of value added by state. For more information, see chapter 28 of **Australian System of National Accounts: Concepts, Sources and Methods** (cat. no. 5216.0).

Trend estimates

Smoothing seasonally adjusted series produces a measure of trend by removing the impact of the irregular component of the series. The trend estimates are derived by applying a 13-term Henderson weighted moving average to the respective seasonally adjusted series. Readers are reminded that trend estimates are subject to revision as subsequent months' data become available.

Unemployed

Persons aged 15 years and over who were not employed during the reference week, and:

- had actively looked for full-time or part-time work at any time in the four weeks up to the end of the reference week and:
  - were available for work in the reference week;
  - were waiting to start a new job within four weeks from the end of the reference week, and could have started in the reference week if the job had been available then.

Abbreviations

ABBREVIATIONS

The following symbols and abbreviations are used in this publication:

ABS	Australian Bureau of Statistics
ACT	Australian Capital Territory
AEC	Australian Electoral Commission
ANZSCO	Australian and New Zealand Standard Classification of Occupations
ANZSIC06	Australian and New Zealand Standard Industrial Classification, 2006 Edition
ASGC	Australian Standard Geographical Classification
Aust.	Australia
B	Borough
BoV	Balance of Victoria
C	City
CD	collection district
CPI	consumer price index
DEEWR	Australian Government Department of Education, Employment and Workplace Relations
EPA	Environment Protection Authority
ERP	estimated resident population
FT	full-time
ICD-10	International Classification of Diseases 10th Revision
LGA	local government area
m	million
ML	megalitre
MMA	Melbourne Metropolitan Area
MSD	Melbourne Statistical Division
MSR	major statistical region
n.e.c.	not elsewhere classified
NEPM	National Environment Protection Measure
NSW	New South Wales

NT	Northern Territory
qtr	quarter
Qld	Queensland
RC	Rural City
S	Shire
SA	South Australia
SD	statistical division
SEPP	State Environment Protection Policy
SITC	Standard International Trade Classification
SLA	statistical local area
SSD	statistical subdivision
Tas.	Tasmania
Vic.	Victoria
WA	Western Australia